

## ABSTRACT OF THE DISCLOSURE

A method for authenticating a network device includes determining that a network link that uses a primary signaling technology and a secondary signaling technology is coupled to the network device; obtaining, using the secondary signaling technology, a unique link identifier that is associated with the network link using the secondary signaling technology; establishing the unique link identifier as a unique device identifier; and authenticating the network device to a service provider by communicating the unique device identifier to the service provider over the network link using the primary signaling technology. In one approach, the primary signaling technology is ADSL and the secondary signaling technology is ISDN. The unique link identifier may be an ISDN telephone number for an ISDN line which is obtained using caller ID techniques.